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UNIVERSITY OF TORONTO UNIVERSITY EXTENSION

DIRECTOR: J. R. GILLEY · B. A. Sc.

MODERN PROCESSING OF THE COMMON METALS

for

MINING MEN

October 1954 - March 1955

This Course is designed to fill the needs of people employed in the mining industry, particularly those whose offices are located in the Toronto area and who are desirous of increasing their knowledge of ore-dressing and smelting processes for the extraction of metals from their ores. The purpose is to make them more familiar with the terms and methods used in connection with the processing of the common metals, namely, - gold, silver, copper, lead, nickel, iron, zinc, aluminum and magnesium.

The Course is divided into two parts. In the first, general principles are described. Beginning with the ore, as mined, the various steps through which the material passes are treated. These include such operations as crushing, grinding, screening, classification, washing, concentration, roasting, sintering, smelting and refining. The reasons, both technical and economical, for adopting a particular process are considered.

In the second part of the Course, the application of these principles to the individual metals is discussed. Where possible, mention of other metals, such as tin, cobalt, manganese, chromium, uranium and tetanium, is made for the purpose of illustration and to make the Course as complete as possible.

LECTURER: Professor H. U. Ross, B. ENG., M. SC. MCG.
Department of Metallurgical Engineering,
University of Toronto

Time: Thursday evenings, 7.30 p.m.
October 7th to December 9th and January 13th to March 17th

Place: Room 123, Wallberg Building

Fee: \$25.00

PROGRAMME OF LECTURES ON REVERSE SIDE

MODERN PROCESSING OF THE COMMON METALS FOR MINING MEN

- 1954 October 7th
 INTRODUCTION; COMPOSITION OF EARTH'S CRUST; ELECTROCHEMICAL SERIES OF
 THE ELEMENTS
- October 14th
 ORE DEPOSITS; MINERALS; ORES; SAMPLING
- October 21st
 ORE DRESSING
- October 28th
 CRUSHING; GRINDING; SCREENING; CLASSIFICATION
- November 4th
 THICKENING and FILTERING
- November 11th
 CONCENTRATION; HAND PICKING, MAGNETIC SEPARATION, TABLES SPIRALS, JIGS
- November 18th
 SINK-AND-FLOAT PROCESS; FLOTATION
- November 25th
 ORE DRESSING OF NONFERROUS ORES
- December 2nd
 BENEFICIATION OF IRON ORES
- December 9th
 DRYING; CALCINING; ROASTING; SINTERING
- 1955 January 6th
 SMELTING; REFINING
- January 13th
 LEACHING; ELECTROLYSIS
- January 20th
 GOLD, SILVER and PLATINUM
- January 27th
 COPPER
- February 3rd
 NICKEL and COBALT
- February 10th
 LEAD and ZINC
- February 17th
 IRON and STEEL
- February 24th
 URANIUM; TITANIUM; VANADIUM; ZIRCONIUM
- March 3rd
 CHROMIUM; MANGANESE; MOLYBDENUM; SILICON
- March 10th
 ALUMINUM and MAGNESIUM